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AMSAT NEWS SERVICE
ANS-259

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

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ANS-259 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 259.01
>From AMSAT HQ KENSINGTON, MD.
September 16, 2018
To All RADIO AMATEURS
BID: $ANS-259.01

Booking is Open for the 2018 AMSAT Space Symposium in Huntsville

AMSAT's 2018 36th Annual AMSAT Space Symposium and Annual General Meeting will be held Friday through Sunday, November 2, 3, & 4, 2018 in Huntsville, Alabama. The location will be at the US Space and Rocket Center, One Tranquility Base, Huntsville, Alabama: https://www.rocketcenter.com/

Hotel accommodations will be next door at the Marriott at the Space & Rocket Center, 5 Tranquility Base, Huntsville, Alabama USA. Hotel reservations for the Symposium may be made by individual attendees directly with Marriott reservations at:
+ 1-(800) 228-9290 or
+ 1-(256) 830-2222 or
+ On-line at http://tinyurl.com/Marriott-2018-Symposium-Hotel
+ Please mention the Radio Amateur Satellite Corporation (AMSAT),

Reference Number M-BIHHXTA for the group rate of $104 per night.
The AMSAT group rate is available 10/31/18 to 11/04/18
Book by 10/10/18
+ Marriott perks include free parking for attendees and
complimentary WiFi.

The 2018 AMSAT Space Symposium and Annual Meeting features:
+ Space Symposium with Amateur Satellite Presentations
+ Operating Techniques, News, & Plans from the Amateur Satellite World
+ Board of Directors Meeting open to AMSAT members.
+ Opportunities to Meet Board Members and Officers
+ AMSAT Annual General Membership Meeting
+ Auction, Annual Banquet, Keynote Speaker and Door Prizes !!
+ Our Keynote Speaker this year will be announced soon.

Registration for the Symposium $60 per person. Banquet registration
is $50 per person. Registration for the Symposium and Banquet can be
ordered on-line at:
https://www.amsat.org/product-category/amsat-symposium/
+ $60 Early Registration Through September 30, 2018
+ $65 Registration October 01, 2018 - October 26, 2018
+ $70 Registration at the Door
+ Dinner reservations are $50 per person and should be made on line
by October 20th to ensure accommodation!

There are multiple alternate activities and attractions in the
Huntsville area include:
+ The Huntsville Botanical Garden
+ Monte Sano State Park
+ U.S. Veterans Memorial Museum
+ Von Braun Center

[ANS thanks the 2018 Symposium Committee for the above information]

AMSAT 2018 Space Symposium Schedule of Events

The 2018 AMSAT Symposium Committee has announced version 1.1 of the
schedule of events for the 2018 AMSAT-NA 36th Annual Space Symposium
and General Meeting, November 1-4, 2018 at the U.S. Space and Rocket
Center, Huntsville, Alabama

Thursday, November 1, 2018 - Board of Directors Meeting
Huntsville Marriott at the Space and Rocket Center
+ 8 am - noon AMSAT Board Meeting, Columbia Room
+ Noon - 1 pm AMSAT Board Lunch Break, Columbia Room
+ 1 pm - 6 pm AMSAT Board Meeting, Columbia Room
+ 6 pm - 7:30 pm AMSAT Board Dinner Break, Columbia Room
+ 7:30 pm - 10:00 pm AMSAT Board Meeting, Columbia Room
+ 6:00 pm - 9:00 pm Registration, (TBD)

Friday, November 2, 2018 - U.S. Space & Rocket Center
Morning
+ 8 am - noon AMSAT Board Meeting, Marriott Columbia Room
(Closed Session)
+ U.S. Space & Rocket Center Educator Training Facility
+ 9:00 am - 4:00 pm Registration, Foyer
+ 9:00 am - noon Self-guided tours of Huntsville and US Space and
Rocket Center
+ 1:00 pm - 1:15pm AMSAT Symposium Kickoff, President's Welcome,
Educator Training Facility

+ 1:15 pm - 5:00 pm Paper Sessions, Presentation Schedule TBD
+ 5:00 pm - 7:30 pm Informal Dinner on your own
+ 7:30 pm - 9:00 pm AMSAT Reception, Educator Training Facility
  Cash Bar Available

Saturday November 3, 2018 - U.S. Space & Rocket Center
Educator Training Facility
+ 8:00 am - 11:45 am Registration, Foyer
+ 8:00 am - 8:15 am AMSAT Symposium Welcome
+ 8:15 am - noon Paper Sessions Presentation Schedule TBD
+ Noon - 1:00 pm Lunch on your own
+ 1:00 pm - 3:15 pm Paper Sessions, Presentation Schedule TBD
+ 3:30 pm - 4:45 pm AMSAT Annual Meeting & Awards Ceremony
+ 6:00 pm - 7:00 pm Attitude Adjustment, Cash Bar, Saturn V Hall
+ 6:00 pm - 10:00 pm Cash Bar, Saturn V Hall
+ 7:00 pm - 10:00 pm Banquet, Saturn V Hall
  Keynote Speaker - TBD
  Prize Drawing

Sunday November 4, 2018
+ 9:00 am - 4:00 pm U.S. Space and Rocket Center
  Marshall Space Flight Center Tour
  Exact Times, Itinerary, and Cost TBD

[ANS thanks the 2018 Symposium Committee for the above information]

FUNcube/AO-73 Schedule Changes Due to Full Sun Illumination

FUNcube/AO-73 is now in continuous sunlight and the FUNcube team has decided to leave the satellite in education mode (full power beacon, no transponder) until further notice. The reason for doing this is to allow the satellite's temperature to stabilise.

There is more information at https://funcube.org.uk/news/

Due to the continuous illumination this means that the usual auto-nomous switching between transponder on in eclipse and high-power telemetry when in sunlight will no longer be effective! At this time it looks like the spacecraft will be in this situation for more than eight months until sometime in April next year.

This schedule was originally planned to provide a very strong tele-metry signal for schools to use during daylight hours and for amateur operation at night (and also at weekends and over holidays).

The FUNcube team has decided to have AO73/FUNcube-1 initially operate for alternate periods of one week in either safe or educational modes. This should enable an evaluation period to determine whether the currents do affect the spin rate. Safe mode provides low power tele-metry and education mode the usual high power telemetry. It will also enable an analysis to see whether the satellite becomes hotter or cooler in each mode.

This schedule may be changed in light of experience and the FUNcube team will update everyone on such changes via the AMSAT-BB.

This will be a new experience for the spacecraft so the capture of the largest possible amount of telemetry remains an important tool for the team to have. We are very grateful to everyone who continues to upload the telemetry they have received to the Data

Warehouse. It is invaluable.

In addition to AO73/FUNcube-1, the FUNcube-2 transponder on UKube-1 remains operational and EO88/Nayif-1 continues to operate autonomously with the transponder on when in eclipse and high- power telemetry in sunlight.

[ANS thanks the FUNcube/AO-73 for the above information]

FM, Linear Satellite Frequency Table Updated

The AMSAT FM and linear transponder satellite frequency summaries have been updated with recent coordination information:

FM
https://www.amsat.org/fm-satellite-frequency-summary/

Linear
https://www.amsat.org/linear-satellite-frequency-summary/

[ANS thanks Paul N8HM for the above information]

Tips Regarding Image Capture From AO-92

Jerry Buxton, NØJY, AMSAT Vice-President Engineering, provided some insight about of how the AO-92 camera image capture is transmitted via its high speed telemetry data downlink to how the images are produced on the Fox telemetry web pages.

Visit this page to view the images that have been captured:
http://www.amsat.org/tlm/leaderboard.php?id=0&db=FOXDB

Some stations may have captured partial images that they can see on their local FoxTelem display, the web page image is produced from the data received by the server from the many stations who may be capturing the pass with FoxTelem. That literally means the more the merrier, and even if you only see as little as one scan line on your FoxTelem image that line will be sent to the server to be "stitched together" with all other image data that others capture.

Your line may be the only capture of that line and just what is needed to complete the whole image. While the single line or incomplete image on your display may seem insignificant or be disappointing, you are contributing to the opportunity to have the entire image available on the web. That is significant, and counting on several stations to receive the components of a full image is part of the design of FoxTelem.

To participate in capturing the full image you must have the Decoder Options "Upload to Server" checked in your FoxTelem settings. That setting plus the participation of many stations, no matter how much or how little data they might individually receive, is what can make full images available for all to see on the website.

Thank you for participating in the science the Fox-1 satellites deliver, and enjoy the birds!

[ANS thanks Jerry Buxton, NØJY, AMSAT Vice-President Engineering for the above information]

Hosting an ARISS Contact in the USA

Editor's Note: The Proposal Window Is Now Open

Proposals from schools and organizations in the US are accepted during two proposal windows each year. The Fall 2018 proposal window is now open for contacts to be scheduled from July 1, 2019 – December 31, 2019. This proposal is due to ARISS by November 15, 2018 at 11:59 PM Pacific Time.

A scheduled ARISS contact is a voice-only communication via Amateur Radio between the International Space Station (ISS) crew and classrooms and communities. ARISS contacts allow education audiences to learn firsthand from astronauts what it is like to work and live in space. These scheduled contact opportunities are offered to formal and informal education institutions and organizations, individually or working together. The radio contacts are approximately 10 minutes in length due to the radio communication window permitted by the logistics of orbital passes of the ISS. During the contact, students interact directly with astronauts and cosmonauts during this communication window using a question and answer format.

To maximize these radio contacts, the ARISS program looks for organizations that will draw large numbers of participants and integrate the radio contact into a well-developed education plan. Because of the nature of human spaceflight and the complexity of scheduling activities aboard the ISS, organizations must demonstrate flexibility to accommodate changes in contact dates and times.

ARISS Proposal Requirements

U.S. education organizations interested in hosting an ARISS scheduled contact will find information about submitting a proposal below. (International schools should submit applications following instructions provided on the international ARISS Program website.)

Educational proposals should include plans for students to:
study topics related to space technology, space exploration, or space research, and,
learn about communication, wireless technology, and radio science
The more advance preparation educators make with educational plans, the more learning and value the ARISS event will have for students. Imagine your students interviewing an astronaut in space, maybe even using an antenna your students have assembled!

ARRL's Education & Technology Program and NASA offer valuable resources to help you and your students learn about wireless technology and satellite communications and space exploration. Go to ARRL's web page: Preparation for an ARISS Contact for links to those resources.
An ARISS Technical Mentor is assigned to assist educational organizations with technical preparations and logistical coordination of the contact. With the assistance of your ARISS Technical Mentor, ARRL and AMSAT can help you find a local Amateur Radio group to provide equipment and expertise. In some cases, local ham radio club volunteers may also be able to assist with lessons on communication,

wireless technology, or radio science.

Submitting a Proposal

The Proposal Window
Proposals from schools and organizations in the US are accepted during two proposal windows each year. The Fall 2018 proposal window is now open for contacts to be scheduled from July 1, 2019 - December 31, 2019. This proposal is due to ARISS by November 15, 2018 at 11:59 PM Pacific Time.

The ARISS Proposal Process
Following is the sequence of steps involved in the proposal and selection process.
Interested organizations in the US should obtain a planning guide with information about expectations and preparations for a proposal.
Organizations participate in an online Information Session.
Organizations reach out to local educational partners and local Radio Amateurs to develop and submit a proposal using the current proposal form.
A committee of representatives from NASA, ARRL and AMSAT evaluate and approve proposals.
6 to 8 weeks after the close of the proposal window, organizations with approved proposals are sent a congratulatory email. Declination emails are also sent out at that time. Organizations are given the opportunity to request proposal feedback.
Selected organizations participate in an ARISS Orientation Session and are paired with an ARISS Technical Mentor who will help them develop an Equipment Plan.
After the Equipment Plan is approved, the organization initiates their Education Plan and preparations for the contact get underway
If you have questions regarding the proposal process, please send an email to: ariss.us.education(a)gmail.com

Upcoming Proposal Webinars
In order to help organizations prepare proposals, the ARISS program offers online Proposal webinars. These webinars are an hour in length and are designed to provide more information regarding US ARISS contacts and the proposal process, as well as provide an avenue for interested organizations to ask questions. Attending an online Proposal webinar is not required but is strongly encouraged.

Online Proposal webinars for the Fall 2018 proposal window will be offered during the fall proposal window. Check back at this web site in early September for details on webinars.

ARISS Proposal Guide
A Proposal Guide is offered to help you plan and identify the resources you will need to host an ARISS scheduled contact.

After reading the Guide and developing your plan, you can complete the ARISS Proposal Form and submit it during the proposal window.

Download the current version of the Proposal Guide (Fall 2018)

ARISS Proposal Form
US schools and educational organizations may download the ARISS Proposal Form to submit a proposal to host an ARISS contact. Use this form to submit the details of your Education and Outreach Plan.

For Additional Information
Contact the ARISS US Program Coordinator to obtain information about Program expectations and proposal guidelines by sending an e-mail to ariss.us.education(a)gmail.com

For an overview of the ARISS international program visit www.ariss.org.

Technical Proposal
Use this form to provide the information needed by the ARISS Operations Team to be assured that you have the equipment in place to successfully support your contact. Submit this completed form to your assigned Technical Mentor as soon as possible, but no later than 3 months after your Education Plan is approved. Download the Equipment Plan Form

Ground Station Recommendations
The recommendations for the ground station to support a scheduled ARISS school contact are considerably more robust than needed for a casual contact with the ISS. Because the scheduled contact is a one-time event involving a large audience every effort is taken to configure a ground station that will offer the maximum communications window possible within the constraints of orbital mechanics and line of sight considerations, and to provide redundancy in the event of unexpected equipment failure. If you are considering supporting an ARISS scheduled contact please review current Ground Station Recommendations.

[ANS thanks ARISS for the above information]

Frank Griffin K4FEG, SK

ANS has received word that Frank Griffin K4FEG has become a silent key. Many will recognize K4FEG as a friendly voice on the birds, as well as a mentor/elmer. Many have Frank in our satellite logs. He had a knack of remembering folks voices and replying to them by name. We express our collective sympathies and best wishes to Frank's family.

[ANS thanks Ed WA7ETH and others via AMSAT-BB for the above information]

Call for Volunteers, ANS Seeks Rotating Editors

The AMSAT News Service (ANS) is seeking volunteers to serve as rotating editors for its weekly newsletter.

Editors work on a rotating schedule, each taking a different turn editing a specific week's newsletter as scheduled by the ANS Editor in Chief. Editors support each other by seeking and reporting to the Editor of the week, information and resources of interest to the AMSAT community. The number of newsletters assigned will be dependent upon the number of available editors at any given time. The average editor can expect to spend, on average, 4-5 hours for each newsletter, dependent on available material. Prospective editors are required to be AMSAT members in good standing and have a genuine interest in satellite operation and an understanding of AMSAT's mission. Former editing experience is a plus but not required.

If interested, please submit an inquiry, including your contact information to ans-editor at amsat.com.

[ANS thanks the ANS editors for the above information]

Upcoming Satellite Operations

Route 66 On the Air – W6D – September 8-16, 2018 (UTC)
Christy, KB6LTY, will be operating in the special event Route 66 On the Air, using the special event call sign W6D. She will be on as many of the birds as sh can operate during the week: FM, APRS digi, and transponders. No schedule, just listen for the special event call sign W6D. For more information on the event (QSL/certificate) go to the website: http://w6jbt.org/

AMSAT-EA Special Event – AM1SAT – September 10-17, 2018
As part of the IV RadioHam Fair IberRadio 2018 activities, AMSAT-EA members, using the special event call sign AM1SAT, will be activating 14 grid squares across Spain from September 10th to September 17th.

AMSAT-EA is offering an AM1SAT Special Award in two categories: SILVER and GOLD. More information, to include rules and log submission instructions, is available on QRZ: https://www.qrz.com/db/am1sat

Yellowstone (DN42, DN43, DN44, DN52, and DB53) – September 12-21, 2018
RJ, WY7AA, fired up the El Camino and headed to the Rocky Mountains for and little camping trip. FM only. With no internet access, keep an eye on RJ's QRZ page for details, including the DN42/43/52/53 grid corner activation on September 21st.

Southeast Colorado (DM77, DM87, DM88) – September 15, 2018
Ron, AD0DX, will activate some Southeast Colorado grid lines Saturday, September 15th. Plan is DM87/88 grid line at 1604z and then AO-91 at DM77/87 grid line at 1727z, followed by AO-92 at 1737z. Keep an eye on Ron's Twitter page for further updates https://twitter.com/ad0dx

Honduras (DXCC) – September 15-16, 2018
HR2CH will sponsor a special event station in celebration of the 60th anniversary of Radio Club de Honduras. See QRZ page for QSL info.

Northern Michigan (EN76, EN85, EN86) – September 15-18, 2018
Chris, AA8CH is heading back to northern Michigan and Drummond Island.

September 15: EN76, EN85
September 16: EN85, EN86
September 17: EN85, EN86
September 18: EN76, EN85
Anyone who missed Chris from N8R in July and/or needs any of these grids can send me an email (see QRZ) and he'll keep you in the loop for expected passes.

Kure Beach, NC (FM13) – September 22-28, 2018
Wayne, NM3B, will be operating holiday style from Kure Beach, NC, September 22-28. Send QSL for confirmation.

North to Alaska (CO28) – October 5-9, 2018
Tucker, W4FS, will be in Juneau, AK, October 5-9th, using the call sign W4FS/KL7. Weather permitting, he may slip up to Whitehorse to use his new Canadian call VE9FS. Watch his Twitter account for specific plans. https://twitter.com/Whiskey4FoSho

Please submit any additions or corrections to ke4al (at) yahoo.com
Updated September 13, 2018

https://www.amsat.org/satellite-info/upcoming-satellite-operations/

[ANS thanks Robert KE4AL for the above information]

ARISS News

The following contacts were successful through the first half of September:

+ 2018-09-06 16:49 UTC between [ASTRONAUT Ricky Arnold KE5DAU using ISS callsign NA1SS and Mendez Fundamental Intermediate School, Santa Ana, CA, USA Contact was direct via AA6TB. ARISS Mentors were Primary Charlie AJ9N with Backups: Brian AB6UI and Norm K6UU

+ 2018-09-10 15:20 UTC between Astronaut Serena Aunon-Chancellor KG5TMT using ISS callsign NA1SS and Colegio Del Sol, San Miguel de Tucuman, Tucuman, Argentina, Contact was direct via LU5KHF. ARISS Mentor was Brian VE6JBJ

+ 2018-09-12 08:21 UTC between Ricky Arnold KE5DAU using ISS callsign NA1SS and Walford Anglican School for Girls, Adelaide, South Australia, Australia, Contact was telebridge via W6SRJ. ARISS Mentor was Tony VK5ZAI

Upcoming ARISS Contact Schedule

Otori Elementary School, Sakai City, Japan, direct via 8N3OH
The ISS callsign is presently scheduled to be NA1SS
The scheduled astronaut is Ricky Arnold KE5DAU
Contact is a go for: Mon 2018-09-17 11:45:55 UTC

Bischöfliche Schule / Technisches Institut, St.Vith, Belgium, and Berufliche Schule Direktorat 1 Nürnberg, Nuremberg, Germany
telebridge via W6SRJ
The ISS callsign is presently scheduled to be OR4ISS
The scheduled astronaut is Alexander Gerst KF5ONO
Contact is a go for: Fri 2018-09-21 10:15:22 UTC

[ANS thanks ARISS, Charlie AJ9N and David AA4KN for the above information]

Shorts From All Over

+ Free Book Download: Introduction to Amateur Digital TV

  Jim, KH6HTV, has released a new book titled "Introduction to Amateur Digital Television". (https://kh6htv.com/)

  This free book pulls together a lot of information previously scattered in over 40 application notes.

  Download the PDF from

https://kh6htv.files.wordpress.com/2018/08/an-45-dtv-book.pdf

[ANS thanks Jim KH6HTV for the above information]

+ APRS Operating Tips Page

AMSAT-UK tweeted a link with operating tips for APRS contacts via ARISS and PSAT:
https://tinyurl.com/ans259-APRS-Tips

[ANS thanks AMSAT-UK for the above information]

+ KO4MA on Amateur Radio Newsline

AMSAT Vice-President of Operations, Drew Glasbrenner, KO4MA, discussed the interference to AO-92 from DMR operation on the Amateur Radio Newsline Report 2132 for Friday, September 7, 2018
Text script and audio playback are available at:
https://tinyurl.com/ANS259-AO92-Interference

[ANS thanks Amateur Radio Newsline for the above information]

+ XW-2E Back in AMSAT Elements Distribution

Satellite XW-2E has been reactivated (NORAD CAT ID 40909) and has been added back to AMSAT's 2-line elements distribution.

[ANS thanks Ray Hoad, WA5QGD, AMSAT-NA Orbital Elements Manager, for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
EMike McCardel, AA8EM
aa8em at amsat dot org